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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,236	08/29/2001	Richard A. Hillstead	HILL 100	9154
26568	7590	03/16/2004	EXAMINER	
COOK, ALEX, MCFARRON, MANZO, CUMMINGS & MEHLER LTD SUITE 2850 200 WEST ADAMS STREET CHICAGO, IL 60606			DAVIS, DANIEL J	
			ART UNIT	PAPER NUMBER
			3731	12

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/942,236

Applicant(s)

HILLSTEAD ET AL.

Examiner

D. Jacob Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 14-30, 33-37, 50-52, 65, 67-69, 80 and 81 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 67 and 80 is/are allowed.
- 6) ☒ Claim(s) 14-30, 65, 68, 69 and 81 is/are rejected.
- 7) ☒ Claim(s) 33-37 and 40-52 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/20/03.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

Claim 50 is objected to because the claim depends from itself. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 65 and 68 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 65 recites a means for selectively actuating the first or second hydraulic pressure sources. It is interpreted that both the first and second actuating means are being claimed. The claim further comprises a movable lever, resulting in a double inclusion.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 14-19, 65 and 68 are rejected under 35 U.S.C. 102(b) as being anticipated by Hervas (US 4,962,877). Hervas discloses a hydraulically actuated instrument comprising a handle portion (Fig. 3), an end effector comprising the jaws 4-8 (Fig. 2), a first fluid flow path 12, a second fluid flow path 11 and 14, a cylinder block having cylinders 17 and 25, and first and second members. The first and second members comprise the proximal ends of the pistons 20 and 27. The device further comprises a cartridge 5-8 for holding the staples. The end of the pistons are considered a lever. The pistons are a means for selectively actuating. Means 26 and 27 is biased in a state of lower hydraulic pressure.

Claims 14-19, 21-25, 28, 65, 69 and 81 are rejected under 35 U.S.C. 102(b) as being anticipated Shichman (US 4,488,523). Schichman discloses a hydraulically actuated medical stapler (Fig. 1) comprising shaft 10, end effector/jaws 12, 18 and 20, handle portion 14, first and second actuators 34 and 32, first and second flexible fluid flow paths 140 and 80, first and second pistons 170 and 202, a cylinder block 154, and first and second cylinders 160 and 222. The end effector comprises first and second jaws 18 and 20, respectively. The first articulation resides at the junction of elements 16 and 154 (Fig. 6) and the second resides at the junction of elements 16 and 12 (Fig. 4). Figs. 6 and 4 illustrate how the fluid flow paths are in proximity to the articulation joints. The distal articulation joint is moved laterally to advance/retract the end effector.

The two hydraulic actuators effect two different actions. The first actuator 32 advances/retracts the end effector while the second actuator 34 ejects a staple. The

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interior threads of cylinder 177 (Fig. 6) are considered a "release tab" since they engage the actuating means and secure the piston in a high pressure state.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 20 is rejected under 35 U.S.C. 102(b) as being unpatentable over Hervas in view of Pedlick et al. (US 5,018,657). Hervas discloses advancing the cartridge to eject staples (Col. 2, lines 22-26), but fails to disclose the use of an extensible balloon to advance the cartridge. Nevertheless, Pedlick (Fig. 2) discloses the use of a balloon 250 (Fig. 5) to advance the cartridge and eject the staples. There must be an airtight fit between the cartridge 8 and the surrounding cylinder that holds the cartridge in order to maintain the air within space 13. Because of the airtight fit, friction makes the cartridge somewhat more difficult for a user to advance. However, if a balloon were used to advance the cartridge as taught by Pedlick, the fit between the cartridge 8 and the outer cylinder could be substantially reduced. The reduction in friction would translate into an ergonomic reduction of input force by a user. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Hervas

device as taught by Pedlick to include a balloon for advancing the cartridge to reduce the input force by a user.

Claims 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shichman in view of Blanco et al. (US 5,348,259). Shichman fails to disclose a ball and socket type articulation joint adapted to permit 360 degrees of articulation. Nevertheless, Blanco teaches ball and socket articulation joints 16, which permit 360 degrees of articulation. The ball joints enable a user to control the angulation of the stapler end effector. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Shichman device as taught by Blanco to include ball joints enabling a user to control the angulation of the end effector.

The ball and socket joint may also be considered a hinge joint since Blanco's elongated portions 14 rotate with the balls 16 like on a hinge. A control wire A is used to control the articulation.

#### ***Allowable Subject Matter***

Claims 67 and 80 are allowed.

Claims 33-37 and 40-52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is examiner's statement of reasons for allowability: the prior art fails to disclose all of the limitations of claims 33 and 67 including a piston having gear teeth.

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The prior art fails to disclose or suggest all of the limitations of claim 44 including the first and second members comprising a pivotally mounted lever.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Jacob Davis whose telephone number is (703) 305-1232. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Milano can be reached on (703) 308-2496. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DJD  
March 10, 2004

  
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SUPERVISORY PATENT EXAMINER  
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